Oxygen in the air

hydrocarbon emissions + nitrogen oxide emissions = smog

ozone
Non-Attainment

A geographic area that does not meet the National Ambient Air Quality Standard for ozone.

<table>
<thead>
<tr>
<th>OZONE NON-ATTAINMENT AREA CLASSIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal - 36</td>
</tr>
</tbody>
</table>
8-Hour Ozone Nonattainment Areas (2008 Standard)

Nonattainment areas are indicated by color. When only a portion of a county is shown in color, it indicates that only that part of the county is within a nonattainment area boundary.

8-hour Ozone Classification
- Extreme
- Severe 15
- Serious
- Moderate
- Marginal
## St. Louis Ozone History

<table>
<thead>
<tr>
<th>Year</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>Moderate Non-Attainment for 1979 1-Hour Ozone Standard</td>
</tr>
<tr>
<td>2002</td>
<td>Designated Attainment for 1979 1-Hour Ozone Standard</td>
</tr>
<tr>
<td>2004</td>
<td>Moderate Non-Attainment for 1997 8-Hour Ozone Standard, including Jersey County IL</td>
</tr>
<tr>
<td>June 2012</td>
<td>Illinois Counties Designated Attainment for 1997 8-Hour Ozone Standard</td>
</tr>
<tr>
<td>July 2012</td>
<td>Marginal Non-Attainment for 2008 8-Hour Ozone Standard</td>
</tr>
<tr>
<td>February 2015</td>
<td>Missouri Counties Designated Attainment for 1997 8-Hour Ozone Standard</td>
</tr>
</tbody>
</table>
2008 Ozone Standard

- 75 parts per billion (ppb)
- Exceedance is when an 8-hour average of values at a monitor is calculated to be > 75 ppb on any given day
- Violation is when a 3-year average of the 4th highest annual average at a monitor is calculated to be > 75 ppb
Ozone Data Sharing Project

- Ozone Season - April 1 to October 31
- East-West Gateway acts as a clearinghouse for ozone data
- Initial quality assurance screening
- Prepare reports
2014 Ozone Season

- 2 Ozone Days and 4 Exceedances
- August 4
  - West Alton MO
  - Alton IL
  - Wood River IL
- September 28
  - Arnold West MO
1999-2014 Exceedances
2008 8-Hour Ozone Standard

Exceedances

Years


Total Exceedances
5 Yr Running Average
## Summer Weather Facts

<table>
<thead>
<tr>
<th>Days with Temperatures</th>
<th>Years</th>
<th></th>
<th></th>
<th>Average Number of Days per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2013</td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td>90° or greater</td>
<td>60</td>
<td>37</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>100° or greater</td>
<td>21</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

National Weather Service
Trends

- Moderate to Marginal – July 2012
- Anticipate attainment in 2015
- Revised ozone standard October 2015
Then and Now

October 28, 1938 looking east along Pine from 200 block of N. Tucker
St. Louis Post-Dispatch

April 29, 2015 looking east from SSM St. Mary’s Health Center in Richmond Heights
MDNR Visual Air Pollution Camera
For Additional Information

On-line Air Quality Resource Center

www.ewgateway.org/environment/aq/aq.htm

August 2014 AQI Calendar